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## ABSTRACT

A system and method for configuring an air interface processor in a modem. The air interface processor includes an event handler and a microsequencer. The event handler schedules data for transmission and reception in the modem. For transmission, the microsequencer sends commands to a frame formatter to format the data to be transmitted based on the schedule. Similarly for reception of data, microsequencer sends commands to a frame deformatter to deformat received data based on the schedule. The event handler, microsequencer, frame formatter and deformatter are programmable or configurable to accommodate different transmission formats and standards. A multi-way branching instruction is used in the programming of the microsequencer to enable faster processing.

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